

A kit of parts comprises a system and instructions for use for controlling patient temperature which uses a central venous line catheter having a heat exchange element. The central venous line catheter is provided with one or more lumens for providing access to the central blood supply of the patient, and with additional lumens for communicating heat exchange fluid to the heat exchange element. Heat exchange fluid temperature is controlled through a feed back loop in which patient temperature is sensed and used to control a temperature control unit comprising a heating device and/or a cooling device in heat exchange relationship with the heat exchange fluid. A tubing set transports the heat exchange fluid between the central venous line and the temperature control unit, with a pump serving to circulate the fluid in a closed fluid circuit in the system.